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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,540	09/06/2000	David Tomanek	6550-000017	4174

7590 03/16/2006

Harness Dickey & Pierce  
P O Box 828  
Bloomfield Hills, MI 48303

EXAMINER

BRITTAIN, JAMES R

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/601,540

Applicant(s)

TOMANEK ET AL.

Examiner

James R. Brittain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 24-29, 35, 36, 39-42, 44-51, 57, 58, 61-65, 70, 71, 73 and 85-87 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 24, 35, 36, 39-42, 44, 50, 51, 57, 58, 61, 62, 64, 65 and 85 is/are allowed.
- 6) ☒ Claim(s) 25-29, 45-49, 63, 70, 71, 73, 86 and 87 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

The indicated allowability of claims 25-29, 45-49, 63, 70, 71, 73, 86 and 87 is withdrawn in view of further review of the claim construction. A rejection based on the review of the claim construction follows. The inconvenience to applicant is regretted.

Claims 1, 24, 35, 36, 39-42, 44, 50, 51, 57, 58, 61, 62, 64, 65, 85 are allowed.

Claims 25-29, 45-49, 63, 70, 71, 73, 86 and 87 would be allowable if rewritten or amended to overcome the objections and rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

### ***Claim Objections***

Claim 25 objected to because of the following informalities: The limitation “of first and second fastening elements” (claim 25, line 2) is objected to because it lacks the term --said-- prior to “first” so as to read properly. The limitation “the first and second fastening element” (claim 86, line 2) is objected to because “element” is singular and it appears that it should be plural. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25-29, 45-49, 63, 70, 71, 73, 86 and 87 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 25, 27 and 28 are indefinite because the terms “said nanotubes” (claim 25, line 2; claim 27, lines 1-2) and the similar “the nanotubes” (claim 28, lines 1-2) lack clear antecedent basis because two sets of nanotubes are introduced in claim 24 on line 2 and line 3 and it is thus unclear which if any of these nanotubes are being referred to by the limitation. Similarly, claims 45, 47, and 48 are indefinite because the terms “said nanotubes” (claim 45, lines 2-3; claim 47, lines 1-2) and “the nanotubes” (claim 48, lines 1-2) lack clear antecedent basis because two sets of nanotubes are introduced in claim 44 on line 2 and line 3 and it is thus unclear which if any of these nanotubes are being referred to by the limitation. Claims 71 and 73 are indefinite because the terms “the nanotubes” (claim 71, lines 1-2) and “the non-linear tubes” (claim 73, lines 1-2) lack clear antecedent basis because two sets of nanotubes are introduced in claim 1 on line 2 and line 3 and it is thus unclear which if any of these nanotubes are being referred to by the limitation. Claims 86 and 87 are indefinite because the term “the nanotubes” (claim 86, line 2; claim 87, line 2) lacks clear antecedent basis because two sets of nanotubes are introduced in claim 85 on line 2 and line 3 and it is thus unclear which if any of these nanotubes are being referred to by the limitation. Whenever different groups of nanotubes have been defined, the limitations “said nanotubes” or “the nanotubes” must be modified to identify which group is being referred to.

Claim 29 is indefinite because the term “said fastening element” (claim 29, line 2) lacks clear antecedent basis because two fastening elements are introduced in claim 24 on line 2 and line 3, it is unclear which nanotubes are functionalized in claim 28 as indicated above and it is thus unclear which if any of these fastening elements is being referred to by the singular limitation “said fastening element”. Claim 49 is indefinite because the term “the nonlinear

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nanotubes of said first fastening element” (claim 49, lines 1-2) lacks clear antecedent basis because claim 48 does not state that the non-linear nanotubes are formed on the first fastening element.

Claim 45 is indefinite because the term “said at least one of first and second fastening elements” (lines 1-2) has not been previously introduced so as to identify which of the previous fastening elements is being referred to. It is suggested that the limitation be changed to --at least one of said first and second fastening elements--.

Claim 63 is indefinite because the term “the non-linear nanotubes” (line 1) lacks antecedent basis because claim 57 does not indicate which of the nanotubes are non-linear and the term “said fastening element” (line 2) also lacks clear antecedent basis because claim 57 does not utilize the term.

Claim 70 is indefinite because the term “the substrate” (lines 1-2) lacks clear antecedent basis because two substrates are introduced in claim 1 for each fastening element and it is thus unclear which if any of these substrates is being referred to by the limitation.

The remaining claims are indefinite through their dependence on indefinite claims.

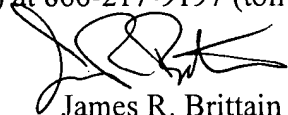
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Brittain whose telephone number is (571) 272-7065. The examiner can normally be reached on M-F 5:30-2:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James R. Brittain  
Primary Examiner  
Art Unit 3677

JRB